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Pb-FREE Sn-Ag-Cu TERNARY EUTECTIC SOLDER

ABSTRACT OF THE DISCLOSURE

A Pb-free solder includes a ternary eutectic composition consisting essentially of about 93.6 weight % Sn-about 4.7 weight % Ag-about 1.7 weight % Cu having a eutectic melting temperature of about 217°C and variants of the ternary composition wherein the relative concentrations of Sn, Ag, and Cu deviate from the ternary eutectic composition to provide a controlled melting temperature range (liquid-solid "mushy" zone) relative to the eutectic melting temperature (e.g. up to 15°C above the eutectic melting temperature).